CLAIMS

I CLAIM:

1. A spring having force levels varying by less than 30% over more than 40% of maximum deflection capacity during loading, comprising a pseudoelastic element shaped to undergo concentrated deformations under loading.

2. A spring according to claim 1, wherein said force levels vary by less than 30% over more than 40% of maximum deflection capacity during unloading.

3. A spring according to claim 1, wherein said said pseudoelastic element has a memory shape where said concentrated deformations are of at least one of flexural and torsional types.

4. A spring according to claim 1, wherein said pseudoelastic element has a memory shape with at least one bent location where flexural deformations concentrate.

5. A spring according to claim 1, wherein said pseudoelastic element has a memory shape with at least one element within which torsional deformations concentrate.

6. The spring according to claim 1, wherein said pseudoelastic element has a rectangular cross section.

7. The spring according to claim 1, wherein said pseudoelastic element has a circular cross section.

8. The spring according to claim 1, wherein said pseudoelastic element has an elliptical cross section.

9. The spring according to claim 1, wherein segments of said pseudoelastic element outside regions where concentrated deformations occur are stiffened.

10. The spring according to claim 1, wherein said pseudoelastic alloy is formed of elements selected from the group consisting essentially of Ni, Ag, Au, Cd, In, Ga, Si, Ge, Sn, Sb, Zn, Nb, Cu, Co, Fe, Mn, Pt, Al, Ti, Cr, Be, C and Tl, and combinations thereof.

11. The spring according to claim 1, wherein said pseudoelastic element has been cold-worked and then heat treated when restrained in order to assume a memory shape.

12. The spring according to claim 1, wherein said pseudoelastic element has been heat treated in free condition after establishment of a memory shape.

13. The spring according to claim 1, wherein said force levels are applied and removed at least once for improving stability under subsequent cyclic load application.

14. A brush holder incorporating a spring having force levels varying by less than 30% over more than 40% of maximum deflection capacity during loading, with said spring comprising a pseudoelastic element shaped to undergo concentrated deformations under loading.

15. A brush holder according to claim 14, wherein said force levels of said spring very by less than 30% over more than 40% of maximum deflection capacity during unloading.

16. A brush holder according to claim 14, wherein said pseudoelastic spring is at least partly fixed against lateral deflections.